is highly resistant to leakage of ballast material from its hollow interior due to the presence of the foam layer. Even if cracks or other openings develop in the plastic walls or joints of the barrier, the foam layer is effective to seal these irregularities and substantially prevent leakage of the ballast material from the open area bounded by the foam layer out of the hollow interior of the barrier. Further, barrier devices with the foam layer of this invention are resistant to puncture by fork lift tines or other equipment employed in their installation or transport.

Additionally, the construction of the barrier device of this invention effectively distributes and attenuates the force of impact with a colliding vehicle. The unitary structure formed by the foam layer extending along the surface of each wall within the closed, hollow interior of the barrier enhances the structural integrity of the barrier, and assists in transferring the force of a collision with a vehicle beyond the area of immediate impact to achieve improved overall force attenuation.

Independent claims 1 and 6 each call for a layer of foam material formed along the inner surface of each of the top wall, bottom wall, opposed end walls and opposed side walls which collectively form a unitary structure defining an open area within the hollow interior of the barrier. This open area within the hollow interior, in turn, is at least partially filled with a ballast material.

Examiner's Rejection Under §102(e)

The Examiner rejected claims 1, 3-6 and 8-10 as being anticipated by the Johnson Reference. With reference to paragraphs [0032] to [0036] of that publication, the preferred embodiment of the crash barrier described therein is characterized as comprising a plastic shell 40 of essentially any shape having an interior chamber 42 "filled with at least one shock or sound absorbing filler material 44." See paragraph [0036]. The filler material can be made up entirely of one foam, or a combination of one foam and an additional shock absorbing material such as a

second foam, a liquid, sawdust, solid polymers, plastic or wood chips, sand and the like. See also Fig. 2.

There is absolutely no teaching or suggestion in the Johnson Reference of a barrier having a plastic shell with walls each having an inner surface located within the interior chamber 42 which is covered with a layer of foam, wherein the foam layer along the walls defines an open area to receive ballast material. On the contrary, the interior chamber 42 of the Johnson Reference is "filled" with a shock or sound absorbing filler material, i.e. the filler material occupies the entire volume of the interior chamber 42. That filler material can comprise foam alone, or a combination of foam and water, sand etc. If the filler material is a combination of foam and something else, then it follows that either the foam is placed in the interior chamber 42 first and the other filler material is then located atop the foam, or vice versa, until the chamber 42 is "filled." If the filler material is solely foam, then there is no ballast material within the interior chamber 42 and the foam occupies its entire volume.

This difference in construction between the Johnson Reference and that of the claimed invention is significant. The layer of foam material "substantially entirely covering" the inner surface of each wall in this invention functions to create a seal preventing ballast material from the open area defined by the foam layer from leaking out in the event a wall of the barrier cracks, is punctured or otherwise leaks. In the Johnson barrier, the area of the barrier interior which receives water, sand or other ballast has no foam material surrounding it and would readily leak out if the plastic shell cracks or punctures there. If only foam is used in the Johnson barrier, without a ballast material such as water or sand, it would be extremely light weight and unsuitable for use in applications for which the present invention is intended. Further, the layer of foam material along each wall of the barrier of this invention forms a "unitary structure" which enhances the structural

integrity of the walls. The absence of foam in some areas of the interior chamber 42 of the Johnson Reference, when other filler materials are used, lessens the overall structural integrity of the barrier and results in a failure to transmit the force of a collision beyond the area of immediate impact as in the present invention.

Claims 1, 3-6 and 8-10 are clearly allowable over the Johnson Reference.

Rejection Under §103(a)

The Examiner rejected claims 2 and 7 as being obvious over the combination of the Johnson Reference and patent No. 4,007,917 to Brubaker. The '917 patent is cited as teaching the use of a foam cushioning layer having a thickness of about 1". The invention of the '917 patent is directed to a particular type of foam material which absorbs the energy of an impact rather than rebound in response to an impact, such as can occur with closed cell foams. The '917 patent discloses affixing a layer of foam to the outside of a highway structure such as a guard rail, bridge column and the like. There is no teaching in the '917 patent of employing the foam therein as a layer along the walls within the interior of a barrier, as in the present invention. In fact, a combination of the '917 patent and the Johnson Reference would merely produce a barrier whose entire volume is filled with a foam such as that disclosed in the '917 patent, or a barrier partly filled with such foam and then another ballast material atop the foam. Claims 2 and 7 are thus allowable over this combination.

In view of the above arguments, applicants consider this case to be in a condition for allowance and respectfully request early notification of same.

Respectfully submitted,

HOLLAND & KNIGHT LLP

CUSTOMER NO. 23573

By _____
Thomas L. Kautz, Reg. No. 28,726

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